

Statement of Work

Summit Lake Battery System Upgrade Project 22-450-1

Prepared by: *James W. Brede, PMP*

Date: 11/15/22

Project purpose:

Upgrade existing battery system at the Summit Lake Communications Site. Existing batteries are at end-of-life and in dire need of replacement. The Summit Lake site uses photovoltaic solar panels to generate power needed to operate critical communication systems at this site.

Scope of Work:

The scope of this project includes the purchase and installation of a racked battery system (battery array), that meets or exceeds requirements as listed below:

- ✓ System must be capable to provide for a minimum of 15 days of power capacity with no sun exposure.
- ✓ System must provide a minimum of 900-amp hours per-day.
- ✓ System must include AGM valve regulated, lead acid batteries (VRLA).
- ✓ Batteries must be robust, able to withstand temperature variations between 53 to 78 degrees.
- ✓ Batteries must consist of a negative 48-volt system, 2 volts per-cell nominal.
- ✓ Electrical system must remain on-line during battery transition.
- ✓ Contractor shall remove, transport and dispose of existing battery system.
- ✓ Replace existing Solar Controllers to accommodate 17KW of photovoltaic panels and 355 Amps of charge.

Location: Custer County Idaho

Latitude: 44-18-21.8 N

Longitude: 113-29-03.4 W

Estimated cost of this project is **\$500,000**

Period of Performance:

Project estimated start: Summer, 2023

Project estimated completion: Fall, 2023

Deliverables Schedule:

Project Award (Winter 2022)

Mobilize & Construction (Spring Summer 2023)

Project Close (Fall 2023)

Applicable Standards:

Power Requirements (Contractor's responsibility)

Potential Contractors:

- ✓ To be determined (TBD)

Acceptance Criteria:

- ✓ Project Award
- ✓ Completed installation
- ✓ Project Close

Special PSC Requirements:**Power Specifications:**

- ✓ All construction shall meet national, state and local building codes.
- ✓ Refer to BLM Standard Requirements and Information Governing Construction of Electronic Facilities.

Attachments:

1. U.S. Department of Interior, Bureau of Land Management, Communication Use Lease No. IDI 33924



Statement of Work

Mt. Harrison Building Upgrade Project -22-450-2

Prepared by: *James W. Brede, PMP*

Date: 06/17/22

Project purpose:

The current communications shelter is in a state of disrepair, due to inadequate construction design, (see attached pictures for details). Additionally, the facility does not currently have sustainable back up power capabilities in the event of loss of A/C power. Upgrading and hardening the facility will provide adequate protection for sensitive electronic communications equipment currently housed in this facility. Furthermore, this upgrade will provide space for a backup generator and prevent further deterioration of the building, due to extreme weather events. Currently there are multiple public safety/emergency response agencies housed in the facility who rely on these communication resources during day-to-day and emergency circumstances.

Scope of Work:

The scope of this project includes demolition and removal of the existing building and the purchase and installation of a new building. The new building will be either modular (pre-cast) or concrete block, at least 480 square feet, large enough for a separate room for a backup generator and properly sized for current and future power needs. Additionally, the scope of this project will include the purchase and installation of a 500-gallon propane tank, appropriately sized heating and air conditioning system, backup generator, interior equipment racks, cable support system, grounding system, cable entry ports and electrical system to support communications equipment.

Note: Design must comply with USFS requirements, to include color scheme with a semi-flat roof design. Reference USFS Site Management Plan for details.

Location: Cassia County Idaho, near Pomerel ski area.

Latitude: 42° 19' 33.8" North

Longitude: 113° 39' 23.4" West

Estimated cost: **\$475,000.00**

Period of Performance:

Project estimated start: Summer, 2023

Project estimated completion: Late Fall, 2023

Applicable Standards:

- ✓ Grounding must meet Communications Industry Standards;
- ✓ Building must meet State of Idaho Division of Building Safety requirements;
- ✓ Building must comply with USFS design specifications and color scheme;
- ✓ Project must comply with USFS Environmental requirements; and
- ✓ Communications Use Lease requirements.

Acceptance Criteria:

- ✓ Adequate Communications building with all previously mentioned support equipment.
- ✓ Adequate site grounding
- ✓ Forest Service Approval for construction
- ✓ Bid Acceptance
- ✓ Completed installation of all equipment
- ✓ Project Close

Attachments:

1. U.S. Department of Agriculture, Forest Service Communication Use Lease



Statement of Work

Relay Ridge

Building & Tower Upgrade Project -22-450-3

Prepared by: *James W. Brede, PMP*

Date: 06/17/22

Project purpose:

The primary purpose of this project is to replace and upgrade the building and tower at the Relay Ridge communications site located east of Driggs Idaho, in Teton County. The existing tower is at capacity and does not meet TIA industry standards for communication towers. Additionally, existing wood poles are dilapidated and beyond repair.

Scope of Work:

The scope of this project includes demolition and removal of two existing buildings, three wood poles and communications tower. The purchase and installation of a new building and tower. The new building shall be either modular (pre-cast) or masonry block, at least 560 square feet, and large enough for a separate room for a backup generator and sized for current and future power needs. Additionally, this project will include the purchase and installation of the following site infrastructure equipment: Heating and air conditioning system, backup generator, propane fuel system, interior equipment racks, cable support system, grounding system, cable entry ports and electrical system to support interior equipment. The tower shall be a minimum of 80', self-supporting, and include the following support equipment: Ice bridges, antenna ice shields, work platforms, anti-climb hardware, cable runs, cable ladder, ground bus bars, climbing ladder/anti-fall, antenna stand-off mounts and adequate grounding system. Due to limited site space it may be necessary to install temporary power, shelter and tower to keep the site operational during construction.

Note: Design must comply with USFS requirements, to include color scheme with a semi-flat roof design. Reference USFS Site Management Plan for details.

Location: Teton County Idaho, east of Driggs

Latitude: 43° 42' 24.2" North

Longitude: 111° 20' 40.2" West

Estimated cost: **\$925,000.00**

Period of Performance:

Project estimated start: Summer, 2023

Project estimated completion: Late Fall, 2023

Applicable Standards:

- ✓ Grounding must meet Communications Industry Standards;

- ✓ Building and tower must meet State of Idaho Division of Building Safety requirements;
- ✓ Building must comply with USFS design specifications and color scheme;
- ✓ Project must comply with USFS Environmental requirements; and
- ✓ Communications Use Lease requirements.

Acceptance Criteria:

- ✓ Adequate Communications shelter
- ✓ Adequate Communications site grounding
- ✓ Forest Service Approval for construction
- ✓ Bid Acceptance
- ✓ Completed installation of equipment, i.e., propane tank and generator
- ✓ Project Close

Special PSC Requirements:

Building Specifications:

- ✓ Grounding Industry Standard and approved by PSC Technical Staff;
- ✓ Adequate security doorways and entrance;
- ✓ Building meets USFS design specifications and color scheme;
- ✓ Structure must maintain a low profile of less than 12 feet above ground level;
- ✓ All visible exterior surfaces shall be non-reflective;
- ✓ Use of properly designed masonry and/or wood structures encouraged;
- ✓ All construction shall meet national, state and local building codes; and
- ✓ Refer to USFS Standard Requirements and Information Governing Construction of Electronic Facilities.

Attachments:

1. U.S. Department of Agriculture, Forest Service Communication Use Lease



Statement of Work

Snowbank

Tower Upgrade Project -22-450-4

Prepared by: *James W. Brede, PMP*

Date: 06/17/22

Project purpose:

The primary purpose of this project is to replace and upgrade the tower at the Snowbank communications site located approximately 7 miles southwest of Cascade Idaho. Currently there are two towers at this site and one does not meet TIA industry standards for communication towers and has major safety issues due to design.

Scope of Work:

The scope of this project includes removal of existing tower/foundation and the installation of a new tower. The tower shall be a minimum of 60', self-supporting, and include the following support equipment: Ice bridges, antenna ice shields, work platforms, antenna stand-off mounts, anti-climb hardware, cable runs, cable ladder, climbing ladder with anti-fall, ground bus bars and an adequate grounding system.

Location: Valley County Idaho, southwest of Cascade

Latitude: 44-26-34.9 North

Longitude: 116-08-09.1 West

Estimated cost: **\$575,000.00**

Period of Performance:

Project estimated start: Summer, 2023

Project estimated completion: Late Fall, 2023

Applicable Standards:

- ✓ Grounding must meet Communications Industry Standards;
- ✓ Tower must meet State of Idaho Division of Building Safety requirements;
- ✓ Project must comply with USFS Environmental requirements; and
- ✓ Communications Use Lease requirements.

Acceptance Criteria:

- ✓ Adequate Communications site grounding
- ✓ Forest Service Approval for construction
- ✓ FAA Study Required
- ✓ Bid Acceptance
- ✓ Completed installation of all tower support equipment
- ✓ Project Close

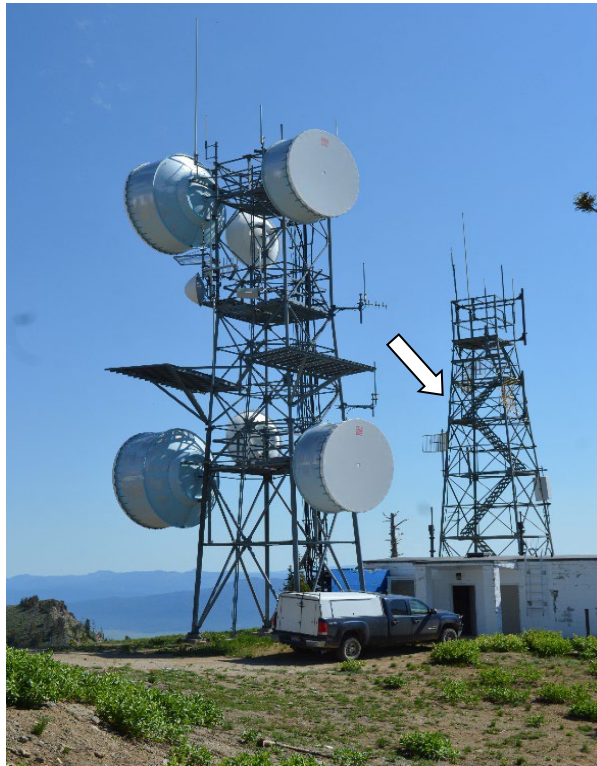
Special PSC Requirements:

Building Specifications:

- ✓ Grounding Industry Standard and approved by PSC Technical Staff;
- ✓ All construction shall meet national, state and local building codes; and
- ✓ Refer to USFS Standard Requirements and Information Governing Construction of Electronic Facilities.

Attachments:

1. U.S. Department of Agriculture, Forest Service Communication Use Lease



Statement of Work

Teakean Butte

Building Upgrade Project -22-450-5

Prepared by: *James W. Brede, PMP*

Date: 06/17/22

Project purpose:

The primary purpose of this project is to replace and upgrade the building at the Teakean Butte communications site located approximately 10 miles northeast of Lenore Idaho. The existing fiberglass building is beyond repair and in dire need of replacement due to age and exposure to years of extreme weather conditions. Replacement shelter will need to be a deployable pre-fabricated communications shelter.

Scope of Work:

The scope of this project includes the removal and disposal of the existing shelter and the installation of a new deployable pre-fabricated communications shelter, large enough to support current and future communications equipment. The pre-fabricated building shall include the following support equipment: Heating and air conditioning system, interior equipment racks, cable support system, grounding system, cable entry ports and electrical system to support interior equipment.

Note: Design must comply with USFS requirements, to include color scheme with a semi-flat roof design. Reference USFS Site Management Plan for details.

Location: Clearwater County Idaho, northeast of Lenore

Latitude: 46-35-18.3 North

Longitude: 116-23-35.1 West

Estimated cost: **\$125,000.00**

Period of Performance:

Project estimated start: Summer, 2023

Project estimated completion: Late Fall, 2023

Applicable Standards:

- ✓ Grounding must meet Communications Industry Standards;
- ✓ Building must meet State of Idaho Division of Building Safety requirements;
- ✓ Building must comply with IDL design specifications and color scheme;
- ✓ Project must comply with IDL Environmental requirements; and
- ✓ Communications Use Lease requirements.

Acceptance Criteria:

- ✓ Adequate Communications shelter to house equipment

- ✓ Adequate Communications site grounding
- ✓ IDL Approval for construction
- ✓ Bid Acceptance
- ✓ Completed installation of new shelter
- ✓ Project Close

Special PSC Requirements:

Building Specifications:

- ✓ Grounding Industry Standard and approved by PSC Technical Staff;
- ✓ Adequate security doorways and entrance;
- ✓ Building meets IDL design specifications and color scheme;
- ✓ All construction shall meet national, state and local building codes; and

Attachments:

1. U.S. Department of Agriculture, Forest Service Communication Use Lease



Existing Shelter



Upgrade Recommendation

Statement of Work

Hawley Mtn.

Building Upgrade Project -22-450-6

Prepared by: *James W. Brede, PMP*

Date: 06/17/22

Project purpose:

The primary purpose of this project is to construct a new communication building adjacent to the existing facility at the Hawley Mtn. communications site, located approximately 23 miles east, northeast of Horseshoe Bend Idaho. The existing building is an old fire lookout that is beyond repair and in dire need of repair. The new building will need to be a deployable, pre-fabricated communications shelter.

Scope of Work:

The scope of this project includes the installation of a new modular or pre-fabricated building, large enough to support current and future communications equipment needs. The building shall include the following support equipment: Heating and air conditioning system, interior equipment racks, cable support system, grounding system, cable entry ports and electrical system to support interior equipment.

Note: Design must comply with USFS requirements, to include color scheme with a semi-flat roof design. Reference USFS Site Management Plan for details.

Location: Boise County Idaho, east, northeast of Horseshoe Bend

Latitude: 43-59-31.6 North

Longitude: 116-01-4904 West

Estimated cost: **\$250,000.00**

Period of Performance:

Project estimated start: Summer, 2023

Project estimated completion: Late Fall, 2023

Applicable Standards:

- ✓ Grounding must meet Communications Industry Standards;
- ✓ Building must meet State of Idaho Division of Building Safety requirements;
- ✓ Building must comply with USFS design specifications and color scheme;
- ✓ Project must comply with USFS Environmental requirements; and
- ✓ Communications Use Lease requirements.

Acceptance Criteria:

- ✓ Adequate Communications shelter to house equipment
- ✓ Adequate Communications site grounding

- ✓ Forest Service Approval for construction
- ✓ Bid Acceptance
- ✓ Completed installation of new shelter
- ✓ Project Close

Special PSC Requirements:

Building Specifications:

- ✓ Grounding Industry Standard and approved by PSC Technical Staff;
- ✓ Adequate security doorways and entrance;
- ✓ Building meets USFS design specifications and color scheme;
- ✓ Structure must maintain a low profile of less than 12 feet above ground level;
- ✓ All visible exterior surfaces shall be non-reflective;
- ✓ Use of properly designed masonry and/or wood structures encouraged;
- ✓ All construction shall meet national, state and local building codes; and
- ✓ Refer to USFS Standard Requirements and Information Governing Construction of Electronic Facilities.

Attachments:

1. U.S. Department of Agriculture, Forest Service Communication Use Lease



Existing facility



Upgrade Recommendation

Statement of Work

Woodrat

Building & Tower Upgrade Project -22-450-7

Prepared by: *James W. Brede, PMP*

Date: 06/17/22

Project purpose:

The primary purpose of this project is to replace and upgrade the building and tower at the Woodrat communications site located east northeast of Kooskia Idaho. Existing antenna structure (40' metal pole) is in dire need of an upgrade and difficult to access. Additionally, the current building is too small, at capacity and in dire need of replacement.

Scope of Work:

The scope of this project includes removal of the existing building, solar array and monopole as well as the purchase and installation of a new pre-fabricated deployable shelter and 60' self-supporting, three-leg communication tower. The new shelter shall be at least 300 square feet, and large enough to support communications equipment. Additionally, the scope of this project includes the purchase and installation of new solar panels, batteries, HVAC system, interior equipment racks, cable support system, grounding system, cable entry ports and electrical system to support interior equipment.

Note: Design must comply with IDL requirements or communication sites.

Location: Clearwater County Idaho, east northeast of Kooskia Idaho

Latitude: 46-11-13.2 North

Longitude: 115-45-59.0 West

Estimated cost: **\$300,000.00**

Period of Performance:

Project estimated start: Summer, 2023

Project estimated completion: Late Fall, 2023

Applicable Standards:

- ✓ Grounding must meet Communications Industry Standards;
- ✓ Building and tower must meet State of Idaho Division of Building Safety requirements;
- ✓ Building must comply with IDL design specifications and color scheme;
- ✓ Project must comply with IDL Environmental requirements; and
- ✓ Communications Use Lease requirements.

Acceptance Criteria:

- ✓ Adequate Communications shelter

- ✓ Adequate Communications site grounding
- ✓ IDL Approval for construction
- ✓ Bid Acceptance
- ✓ Completed installation of all equipment
- ✓ Project Close

Special PSC Requirements:

Building Specifications:

- ✓ Grounding Industry Standard and approved by PSC Technical Staff;
- ✓ Adequate security doorways and entrance;
- ✓ Building meets IDL design specifications and color scheme;
- ✓ All construction shall meet national, state and local building codes; and

Attachments:

1. U.S. Department of Agriculture, Forest Service Communication Use Lease



Existing Shelter



Upgrade Recommendation